Slides showing Implantation of Certain North American Rodents," (2) "Early Stages in the Development of Certain North American Rodents."

G. Lefevre, "Reproduction and Parasitism in the Unionidæ" (joint authorship with W. C. Curtis).

J. A. Long and E. L. Mark, "Maturation of the Egg of the Mouse."

R. S. Lull, "The Armored Dinosaur, *Stegosaurus ungulatus*, Recently Restored at Yale University."

A. G. Mayer, "The Relation between Ciliary and Neuromuscular Movements of Animals."

C. S. Minot, "Comparison of the Early Stages of Vertebrates."

C. F. W. McClure, "Demonstration of a Series of Models, Based on Reconstructions, Illustrating the Development of the Jugular Lymph Sacs in the Domestic Cat (*Felis domestica*)" (presented by G. S. Huntington and C. F. W. McClure).

J. P. Munson, "Organization and Polarity of Protoplasm, Centrosome, Aster and Sphere in Ovarian Eggs, Yolk-nucleus and Vitelline Body."

C. E. Porter, (1) "Les trachées de l'Acanthinoder a cummingi Hope," (2) "Sur quelques Crustacés du Chili."

H. S. Pratt, "Trematodes of the Gulf of Mexico."

O. Riddle, "Experiments on Melanin Color Formation; a Refutation of the Current Mendelian Hypotheses of Color Development."

R. A. Spaeth and E. L. Mark (demonstration), "Chromosomes in Certain Copepods."

C. R. Stockard, "The Experimental Production of Various Eye Abnormalities; and an Analysis of the Development of the Parts of the Eye."

R. T. Young, "Cytology of Cestoda."

Excursions to the museums and other points of interest were conducted by young ladies of Graz. In the unique Landes-Zeughaus of 1642 are 30,000 pieces, including weapons and armor, still seen in the rough racks as originally placed for the use of the soldiers.

On one evening an outing was taken in the Hilmwald, where beside the lake, overhung with hundreds of Chinese lanterns, the Abendessen was partaken of. The beauty of the many-colored lights reflected from the surface of the water, and the quaint folk-music of a band of peasant minstrels added much to the truly Austrian sociability of the evening.

On another occasion the members of the congress lunched together under the trees of a restaurant garden upon the Schlossberg and then enjoyed the views of the distant Alps, beyond the plain of Graz, through which winds the Mur, and nearer, the richly colored roofs intersected by narrow streets and the great city park, with its splendid trees.

Fitting telegrams and addresses were made in celebration of the eightieth birthday of His Majesty the Emperor of Austria and the King of Hungary. Among the excellent responses to the toasts at the final banquet those of President Jordan and Professor Blanchard may be characterized as especially felicitous. After the adjournment of the congress 120 members took part in the excursion to Triest and thence by special steamer along the mountainous coast of Dalmatia.

C. L. Edwards

Scientific Notes and News

Professor William M. Davis, of Harvard University, has been elected a corresponding member of the Berlin Academy of Sciences.

The Thomas Young lecture before the Optical Society was delivered in the lecture hall of the Chemical Society, London, on September 29 by Professor R. W. Wood, of the Johns Hopkins University. The subjects were "The Echelette Grating" and "The Mercury Telescope."

The Advisory Public Health Board of the Public Health and Marine-Hospital Service was called to meet in Washington, October 10, in view of the cholera in Europe. This board is composed of Drs. Simon Flexner, New York City; Dr. William T. Sedgwick, Boston; Dr. Victor C. Vaughan, Ann Arbor; Dr. Frank F. Wesbrook, Minneapolis, and Dr. William H. Welch, Baltimore.

The Department of State has selected the following delegates to the International Conference on Tuberculosis, to be held in Brussels: Dr. Reid Hunt, of the U. S. Public Health and Marine-Hospital Service; Dr. Mazyck P. Ravenel, Madison, Wis.; Dr. Arnold C. Klebs, Chicago, and C. H. Baldwin, Washington, D. C.

President Henry Fairfield Osborn, of the American Museum of Natural History, has

been appointed honorary curator of the department of vertebrate paleontology and Dr. W. D. Matthew has been promoted to the position of acting curator.

IN continuation of the program outlined some time ago, the Wistar Institute of Anatomy and Biology has taken up the Chemical Study of the Nervous System. The work, in cooperation with Professor H. H. Donaldson, has been put in charge of Dr. Waldemar Koch, of the University of Chicago. Dr. Koch retains his connection with the university but will spend part of his time in Philadelphia and the results will be published jointly from the department of neurology of the Wistar Institute and the laboratory of pharmacology of the University of Chicago.

DR. C. F. CLARK, assistant agronomist in the New York State College of Agriculture at Cornell University, has accepted a position in the Bureau of Plant Industry in connection with the sugar beet investigations.

ARTHUR H. ESTABROOK, Ph.D. (Hopkins), will spend the winter in research work at Cold Spring Harbor, Long Island.

DRS. GODDARD and Spinden, of the department of anthropology of the American Museum of Natural History, attended the Congress of Americanists in Mexico City after which Dr. Spinden again took up his work among the Rio Grande Pueblo of New Mexico.

MISS ALICE C. FLETCHER, Thaw fellow in the Peabody Museum of Harvard University, presented a paper on "The Archeological Activities in the United States," before the Section of Anthropology at the Sheffield meeting of the British Association. Miss Fletcher was elected a vice-president of the section.

PROFESSOR G. H. PARKER, of Harvard University, delivered a lecture on "Taste and Smell," at a meeting of the American Academy of Dental Science, held in Boston, on October 5.

AT the stated meeting of the American Philosophical Society on October 7, Dr. John Chalmers Da Costa read a paper on "Suicide."

AMONG the courses of public extension lectures offered by Columbia University is one on "The Science of Zoology, Fundamentals of Biology and Principles of Evolution" by Professor Henry E. Crampton.

AMONG the public introductory lectures to be given at University College (University of London) during October, *Nature* quotes the following: October 3, "Niton: one of the Argon Series of Gases," Sir W. Ramsay; October 4, "The Origin of Scenery," Professor E. J. Garwood; October 6, "The Life and Times of Sennacherib," Dr. T. G. Pinches; "Recent Investigations into the Mental Growth of Children," Dr. C. Spearman; October 10, "Climatic Control," Professor L. W. Lyde; "Instinct," Professor Carveth Read; October 13, "Experimental Phonetics," Mr. D. Jones.

THE College of the City of New York has acquired, as already announced, the complete private library of the late Professor Simon Newcomb, consisting of about 4,000 volumes and 7,000 pamphlets dealing with astronomy, mathematics and physics. Both pamphlets and books are being catalogued and are now accessible to research students, in accordance with the expressed desire of the professor and Mrs. Newcomb.

A STATUE in memory of Dr. Victor Cornil, formerly professor of pathological anatomy at Paris, has been dedicated at Cusset, his native city.

MME. PASTEUR, widow of Louis Pasteur, whom she assisted in his researches, has died at the age of eighty-four years.

DR. JOHN E. MATZKE, head professor of Romanic languages in Stanford University, died very suddenly at Mexico City on September 18. He had gone to that city as the representative of Stanford University on the occasion of the opening of the Mexican National University.

DR. OTTO LÜDECKE, associate professor of mineralogy at Halle, has died at the age of sixty years.

Mr. Hormuzd Rassam, known for his Assyrian explorations, died on September 16, at the age of eighty-four years.

The deaths are also announced of Dr. Zdenko Ritter von Skraup, professor of chemistry at Vienna; of M. Maurice Lévy, professor of mechanics in the Collège de France and inspector general under the government of roads and bridges, and of Dr. Fulgence Raymond, Charcot's successor in the chair of nervous diseases at the Saltpêtrière and eminent for his contributions to pathological anatomy and psychology.

Members of the American Association for the Advancement of Science who contemplate contributing to the program of Section D are requested to send early notice of their intentions and if possible the titles of their papers to the secretary of the section, G. W. Bissell, East Lansing, Mich. The vice-presidential address by Dean J. F. Hayford will discuss "The Relation of Isostasy to Geodesy, Geology and Geophysics." It is proposed to devote at least one session of the meeting to aeronautics and related subjects and papers along this line are especially desired.

The fourth International Congress for the Care of the Insane will be held at Berlin from the third to the seventh of October.

The fifth International Dairy Congress, which will be held in Stockholm in 1911, offers a prize of £20 for the best essay on the nutritive value of raw milk as compared with that of pasteurized, sterilized or evaporated milk, determined, at least in part, by experiments made upon infants.

The results of a series of tests on the strength of pure iron alloyed with nickel and copper made during the last five years in the applied electrochemistry laboratory of the University of Wisconsin are presented in a new bulletin in the engineering series by Professor Charles F. Burgess and James Aston. Professor Burgess discovered a simple method for producing chemically pure iron electrolytically, and received a grant of several thousand dollars from the Carnegie Institution at Washington with which to carry on the investigations. The value of alloys of nickel with iron, copper with iron, and of nickel and copper with iron is considered in detail in a series of tables, and the methods used in making and testing these combinations are fully discussed in the bulletin.

Dr. E. C. Pickering, director of the Harvard College Observatory, announces that a new star, whose approximate position is R. A. $17^h\ 52^m\ 15^s$, Dec. $-27°\ 32'.3$ (1875), was discovered by Mrs. Fleming in the Constellation Sagittarius, on October 1, 1910. It appears on 16 photographs taken at Arequipa with the eight-inch Bache and one-inch Cooke telescopes, between March 21, 1910, and June 10, 1910. The magnitude has been estimated as varying from 7.8 to 8.6, between these dates. The spectrum is quite faint but shows the bright hydrogen lines $H\beta$, $H\gamma$, $H\delta$, $H\epsilon$, $H\zeta$ and $H\eta$, with a trace of $H\gamma$ as dark on the edge of greater wave-length of the bright line $H\gamma$. The star does not appear on seventeen photographs, taken between July 23, 1889, and October 7, 1909, although most of them show stars fainter than the twelfth magnitude and one plate shows stars of the fifteenth magnitude, or fainter. An observation by Leon Campbell on October 3, 1910, with the 24-inch reflector of this observatory confirms the presence of this object and gives its magnitude as obout 10.5. Of the fifteen new stars known to have appeared during the last twenty-five years, eleven have been found at this observatory, nine by Mrs. Fleming from the photographs of the Henry Draper memorial.

The ordinary meetings of the Royal Geographical Society for the session 1910–11 begin, as we learn from the London *Times*, on November 7, when Major Molesworth Sykes will give an account of his further journeys in Persia. Major Sykes will deal, among other subject, with a tour in ancient Parthia. At the second meeting of the society, on November 21, Dr. H. A. Lorentz will give an account of his recent explorations in Dutch New Guinea. The subject deals to a large extent with a region in which an English ex-

pedition is at present at work, under the leadership of Mr. Goodfellow. There has been considerable activity in the exploration of Dutch New Guinea recently by the Dutch themselves, both from the south and from the north. On November 28 Dr. Filippo de Filippi will lecture on some of the more important results of the Duke of the Abruzzi's last expedition to the Karakoram. No doubt one of the most interesting papers of the session will be that on December 19, by Dr. J. B. Charcot, on the results of his recent Antarctic expedition. Another paper of special interest will be that of January 16, 1911, when Sir John Murray and Dr. Hjort will give a detailed account of the "Michael Sars" North Atlantic deep-sea expedition.

THE Department of Agriculture has issued a set of fifteen charts on the composition of food materials; these charts are printed from photo-lithographs in six colors, and show in the case of each material the protein, fat, carbohydrate, ash and water contents and the fuel value expressed in calories. The percentage composition and fuel value are given in figures and the relative proportion of each constituent is represented graphically. For example, in the case of whole milk a glass of milk is shown; 87 per cent. of the figure is colored green to represent the water content, 3.3 per cent. red to represent the protein, 4 per cent. yellow to represent the fat, 5 per cent. blue to represent the carbohydrates and 0.7 per cent. drab to represent the ash content. The fuel value of 310 calories per pound is represented by printing in solid black nearly one third of a square one inch on each edge, since one square inch represents 1,000 calories. The figures given for the percentage composition of the various materials are average figures based upon as many analyses as are available in each case. The food materials shown in these charts are as follows: 1, whole milk, skim milk, buttermilk and cream; 2, whole egg, egg (white and yolk), cream cheese and cottage cheese; 3, lamb chop, pork chop, smoked ham, beefsteak and dried beef; 4, cod (lean fish), salt cod, oyster, smoked herring and mackerel (fat fish); 5, olive oil, bacon, beef suet, butter and lard; 6, corn, wheat, buckwheat, oat, rye and rice; 7, white bread, whole wheat bread, oat breakfast food (cooked), toasted bread, corn, bread and macaroni; 8, sugar, molasses, stick candy, maple sugar and honey; 9, parsnip, onion, potato and celery; 10, shelled bean (fresh), navy bean (dry), string bean (green) and corn (green); 11, apple, dried fig, strawberry and banana; 12, grapes (edible portion), raisins (edible portion), grape juice (unfermented), canned fruit and fruit jelly; 13, walnut, chestnut, peanut, peanut butter and cocoanut. Chart 14 gives the functions and uses of food under the headings, "Constituents of Food" and "Uses of Food in the Body." Chart 15 shows the dietary standard for a man in full vigor at moderate muscular work and the estimated amount of mineral matter required per man per day. These charts are printed on sheets 21 by 27 inches of a good quality of paper, and are for sale by the Superintendent of Documents, Government Printing Office, Washington, D. C. The charts will be found especially useful to instructors and students in classes in physiology, domestic science and other branches in which the food and nutrition of man is studied, either in schools or colleges or in clubs or similar organizations.

THE annual report of the registrar-general for Ireland, issued as a Blue-book and summarized in the London *Times*, shows that the excess of births over deaths in 1909 was 27,786, and that the loss by emigration amounted to 28,676, which was greater by 5,381 than in 1908, but less than the average number—37,141—for the ten years 1899–1908. There would, according to these figures, appear to have been a decrease of 890 persons in the year 1909. With regard to immigration there is no official record, nor does it enter into the estimate of the population to the middle of the year, which was 4,371,570—an increase of 115 on the estimate for the previous year. According to the last quarterly returns of the registrar-general, the population of Ireland in the middle of this year was 4,371,133. The population has therefore been practically stationary for three years. The marriages regis-

tered in Ireland during 1909 numbered 22,650, the births 102,759, and the deaths 74,973. The marriage rate was 5.18 per 1,000 of the estimated population (a decrease of 0.02 as compared with that for 1908, but an increase of 0.06 against the average rate for the ten years); the birth-rate was 23.5 per 1,000 (0.2 above the preceding year and 0.3 above the average); and the death-rate 17.2 per 1,000 (0.4 below the previous year and 0.6 below the average). An estimate of the progress of elementary education was formed from the signatures made by the contracting parties in the marriage registers or certificates. In 1909 93.5 per cent. of the husbands and 95.0 per cent. of the wives wrote their names, the remainder signing by marks, as against 86.8 and 88.6 per cent. in 1899, 78.8 and 78.0 per cent. in 1889, and 72.0 and 67.1 per cent. in 1879.

UNIVERSITY AND EDUCATIONAL NEWS

The Sproul Observatory, of Swarthmore College, is nearing completion. The telescope, which will have a twenty-four-inch aperture, is being constructed at Allegheny, and will probably be installed this coming year. In the same building will be installed a new refracting telescope, the gift of Mr. Stephen Loines, of New York.

The Tuskegee Institute will receive about $400,000 from the estate of Mrs. Dotger, and the Hampden Institute will receive about $250,000 from the estate of Miss Alice Byington.

By the death of Mrs. Mary Hunt Loomis, the estate of the late Colonel John Mason Loomis, amounting to more than $1,000,000, will, it is said, go to the establishment of a technical school at Windsor, Conn.

The Supreme Court has granted an injunction to the stepchildren of the late George Crocker, restraining the executors from selling the property which was bequeathed to Columbia University for a cancer research fund.

Bryn Mawr College will celebrate the twenty-fifth anniversary of its opening on October 21 and 22. Among the speakers will be President Remsen, of the Johns Hopkins University, and President Lowell, of Harvard University.

Dr. Charles C. Harrison, provost of the University of Pennsylvania, has tendered his resignation to the board of trustees, to take effect at the end of the present academic year.

The following promotions and appointments have been made in the chemical department of the University of Illinois: Edward Bartow, professor of analytical chemistry; C. W. Balke, assistant professor of inorganic chemistry; E. W. Washburn, assistant professor of physical chemistry; instructors, Ellen S. McCarthy (Ph.D., Cornell), C. G. Derick (Ph.D., Illinois), Paul E. Howe (Ph.D., Illinois); research assistants, Josef Hecht (Ph.D., Vienna); assistants, H. P. Corson (N. H.), J. H. Mitchell (Ala. Poly. Inst.), C. J. Baker (Univ. of Denver); graduate assistants, H. B. Gordon (Miami), H. H. Radcliffe (Ind. Univ.), G. E. Ostrom (Augustana), N. R. Blaterwick (Grinnell), D. W. Wilson (Grinnell), C. P. Sherwin (Ind. Univ.), E. L. Ross (Iowa State Agr. College), J. H. Bornmann (Illinois); fellows, S. J. Bates (McMaster Univ.), J. W. Read (Missouri), A. A. Schlichte (Michigan), L. R. Littleton (Tulane); graduate scholars, P. S. Burgess (R. I. State College), G. W. Sears (Drury College).

Dr. C. C. Grove has been appointed assistant professor of mathematics at Columbia University.

Mr. H. Bateman, fellow of Trinity College, Cambridge, and lecturer in mathematics in the University of Manchester, has accepted an appointment in the department of mathematics of Bryn Mawr College.

J. F. Daniel, Ph.D. (Hopkins), has been appointed instructor of comparative anatomy at the University of California.

Edith M. Twiss, A.B. (Ohio State University, 1895), Ph.D. (Chicago, 1909), has been appointed assistant professor of botany with charge of plant physiology and bacteriology at Washburn College, Topeka, Kansas. For some years Miss Twiss has taught in the Cleveland High Schools.